Population status and assessment of RBG 2022

AEWA/EGMIWG/7.10 – Kees Koffijberg (Sovon / EGMP Data Centre), Hans Baveco (WENR) & Paul Goedhart (Biometris)

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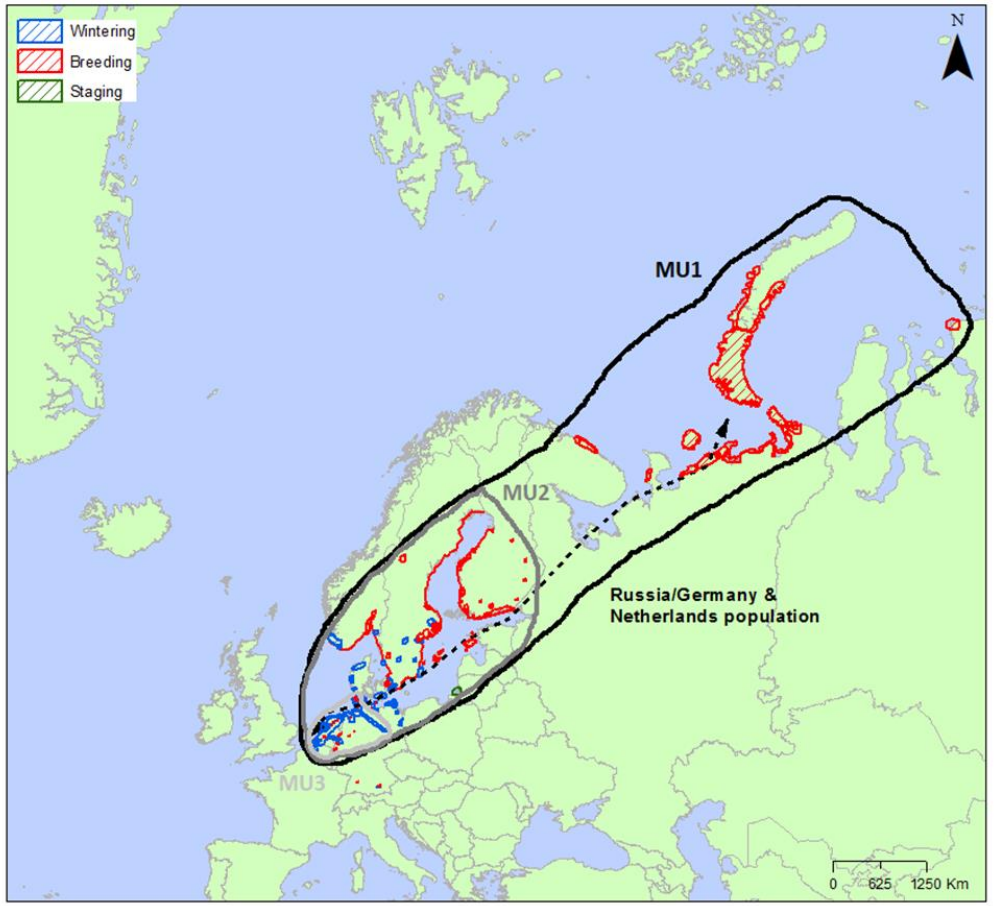
Russian/Germany & Netherlands Population



Range states flyway:

Russia, Finland, Estonia, Sweden, Norway, Denmark, Germany, the Netherlands and Belgium

Management Units within flyway:

1 – Russian breeders (RU), migratory

2 – Baltic breeders (FI, EE, SE, NO [Oslofjord], DK, migratory

3 – North Sea breeders (DE, NL, BE), mainly sedentary

All management units mix during winter in BE, NL, DE, DK and SE (wintering states)

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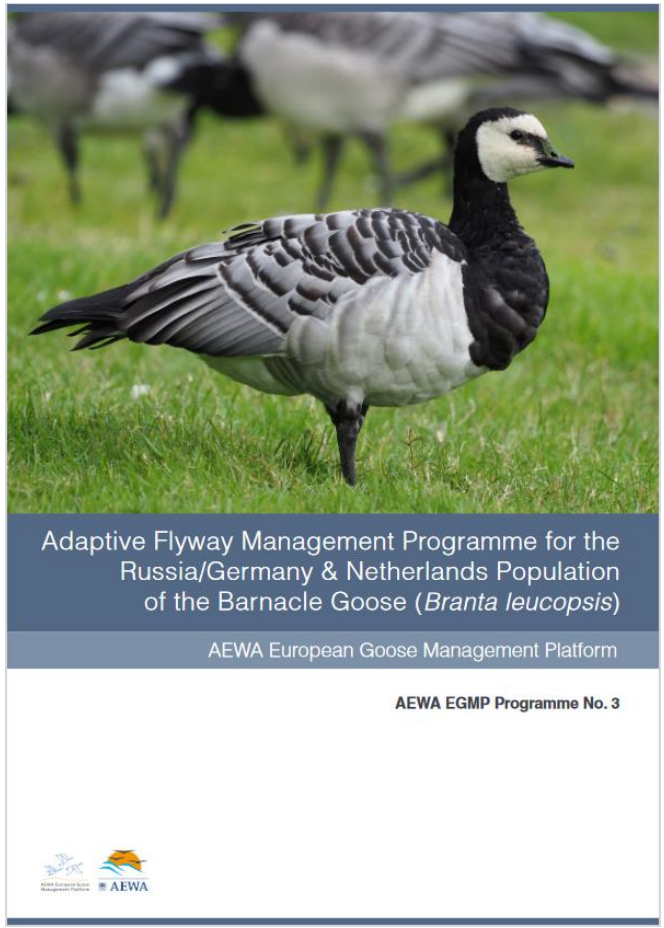
Population FRP's and Management strategies



FRP's:

Flyway (winter): 380,000 individuals

1 – Russian breeders (RU): 112,927 breeding pairs

2 – Baltic breeders (FI, EE, SE, NO [Oslofjord]*, DK): 12,000 bp

3 – North Sea breeders (DE, NL, BE*): 12,000 bp

Based on situation in 2000 when AEWA came into force (flyway population) and country-specific data (MU-populations) – see AFMP for details

*NO + BE regard their breeding populations as not naturally breeding, i.e. not covered by the AFMP

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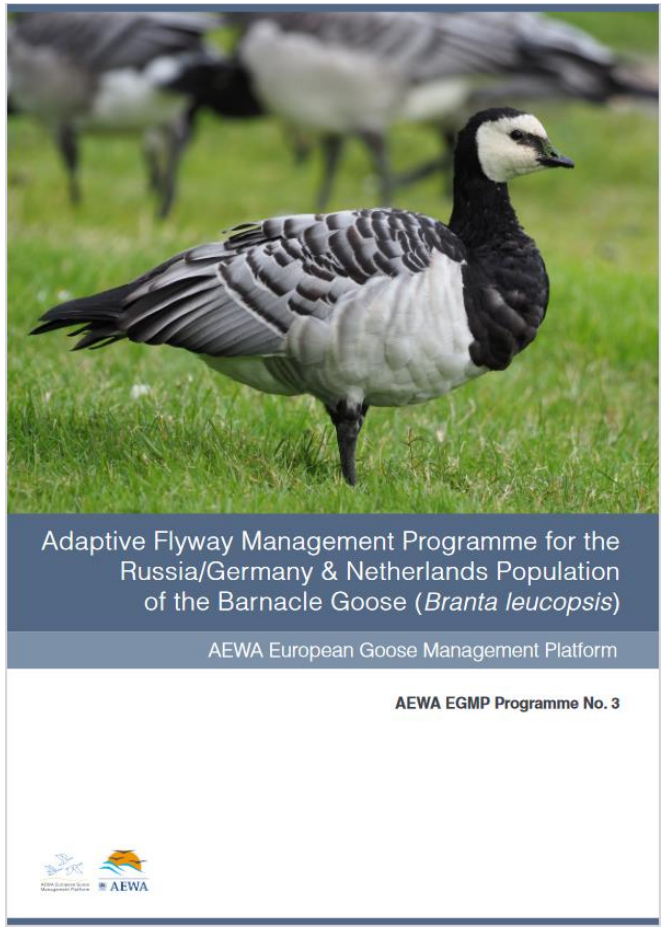
Population FRP's and Management strategies



Management strategy:

Prevent flyway population or breeding population in any MU from declining below FRP (caution measures when < 200% from FRP)

→ No targets like in other EGMP species, but FRP's represent the lower limits of the legally acceptable populations

→ Assessment focuses on whether cumulative impact of derogations (and hunting outside EU) affects these FRP's

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Assessment Protocol

Integrated Population Model (IPM):

Combine all available monitoring date into one single analysis to derive estimates for abundance and population demography:

1. Population counts → Flyway in January + MUs in July-August
2. Reproduction → Flyway in autumn + MUs in July-August
3. Offtake, i.e. mainly derogation data, yearround

Collection of data only possible by a large network of volunteer counters, staff of various agencies, governmental administrations & EU data repository!

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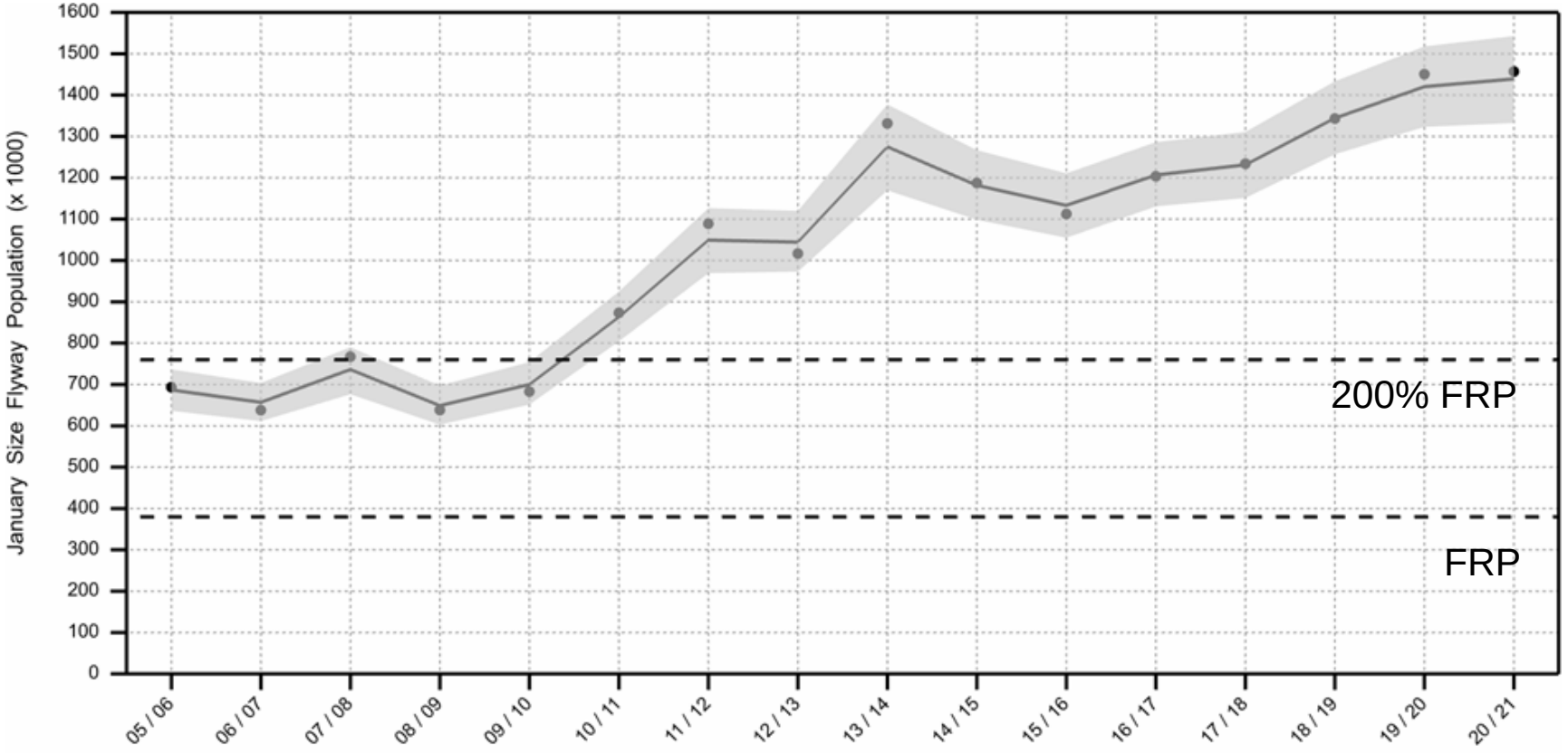
Abundance – Flyway (January)



IPM-estimates (line + shaded area) point at flyway population size of approx. 1.4 million individuals in 2020/2021 - well in accordance with census data (dots)

This is 3.7 times FRP and well above 200% threshold level

Established after long period of population increase, slowed down recently

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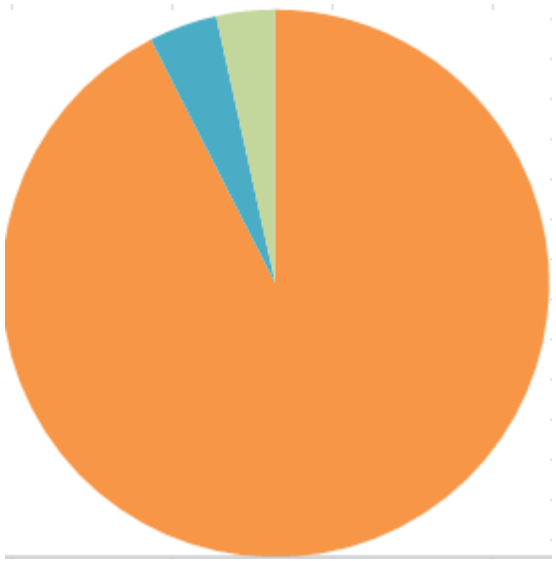
Abundance – Flyway – Size matters!



By far the largest share of the flyway represent MU1 – Russian breeders - approx. 90% of entire flyway population

(based on IPM-estimates of individuals in July)

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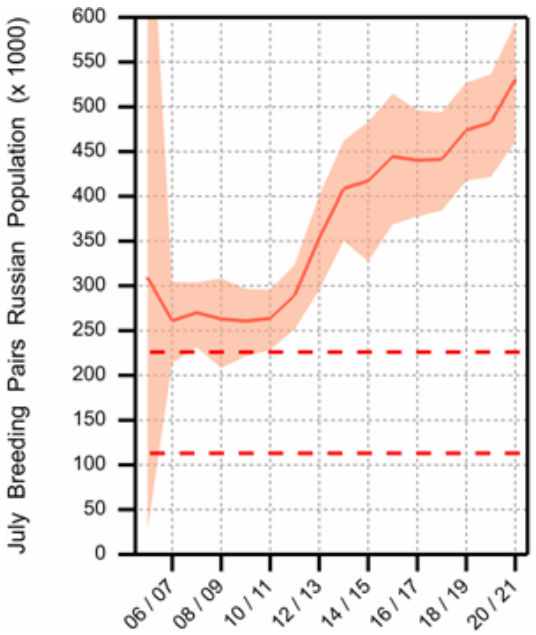
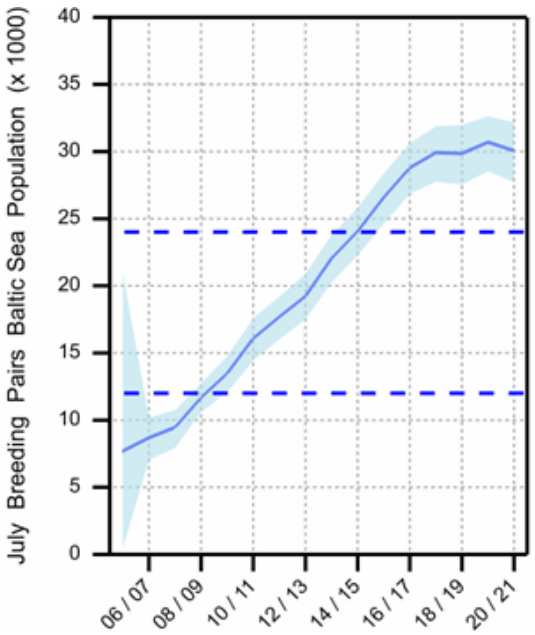
Abundance – MU's (July, converted into breeding pairs)

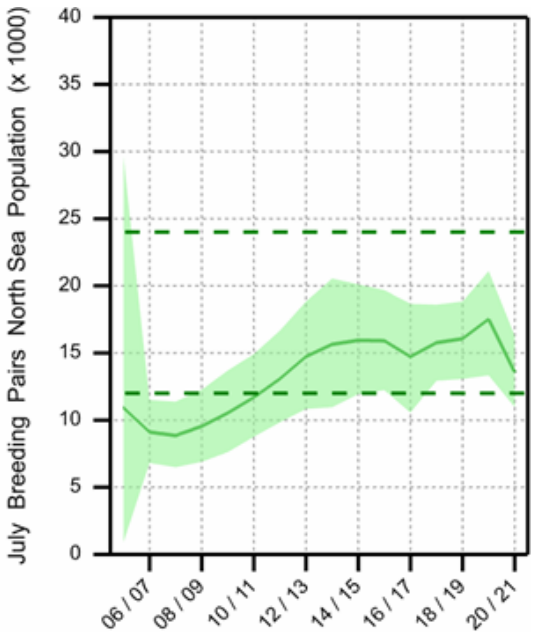
MU1 - RUS



MU2 - BAL



MU3 - NS



MU1 – Russian breeding population: 4.3x FRP in 2020 and above 200% threshold, still increasing

MU2 – Baltic: 2.5x FRP and above 200% threshold, trend levelling off over past five seasons

MU3 – North Sea: 1.4x FRP, since 2010 within 200% threshold, sharp decline in last season

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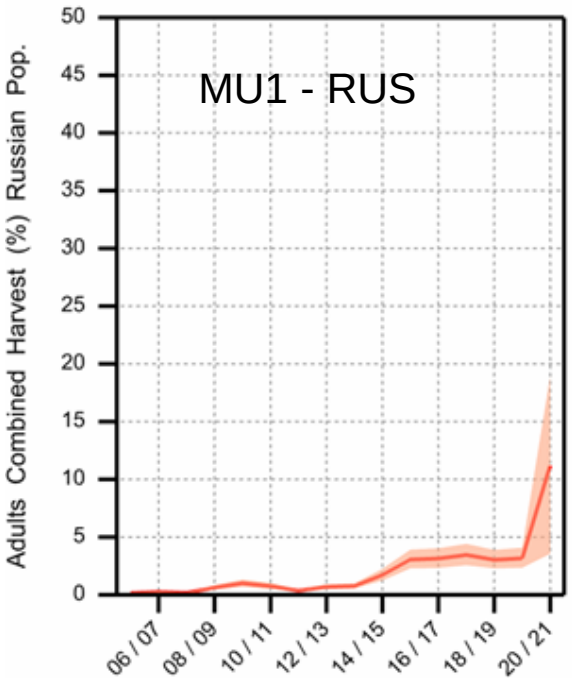
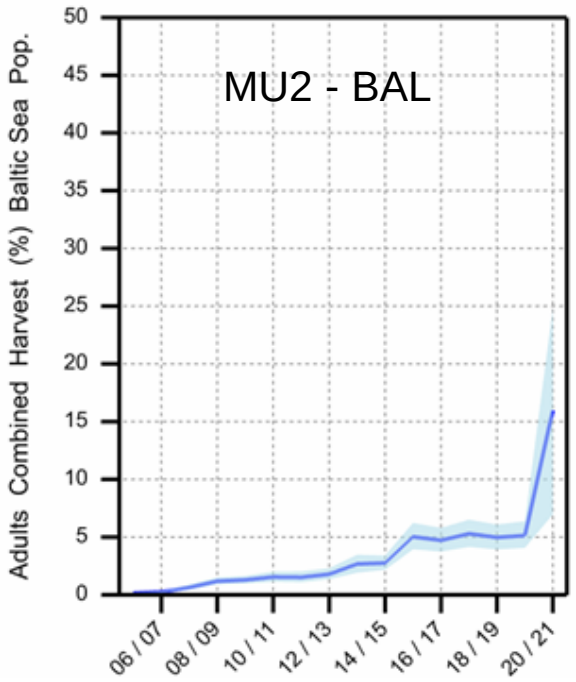
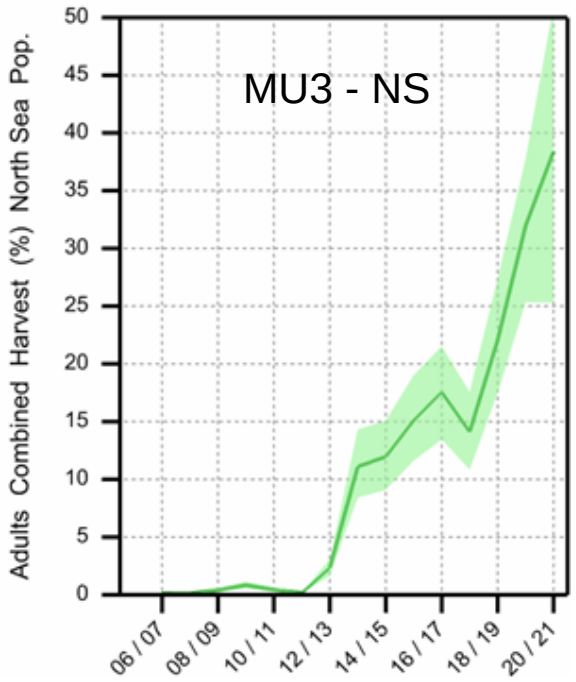
Offtake (derogations)







Note 2020/21 come with large uncertainties as data incomplete!

As a result of increased derogation effort (and unknown harvest in Russia):

→ Increasing offtake rates in all MU's

→ Particularly strong increase in MU3 after 2012, up to > 30%

∑ derogation effort in 2020 (complete data):

73,250 ind. of which 67% in NL

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Demographic rates: reproduction & survival

Reproduction (% young in population):

MU1 - Russian – large fluctuations without clear trend (since 2005, but decline on longer term)

MU2 - Baltic - declining

MU3 - North Sea – fluctuations without clear trend

Field data tend to be below IPM-estimates

Survival (IPM!)

Much higher in adults (0.904-0.969) than in juveniles (0.451-0.758)

Juvenile survival lowest in MU1 (fully migratory, but also includes unknown offtake in Russia)

Juvenile survival North Sea lower than in Baltic, but becoming similar due to decrease in Baltic population

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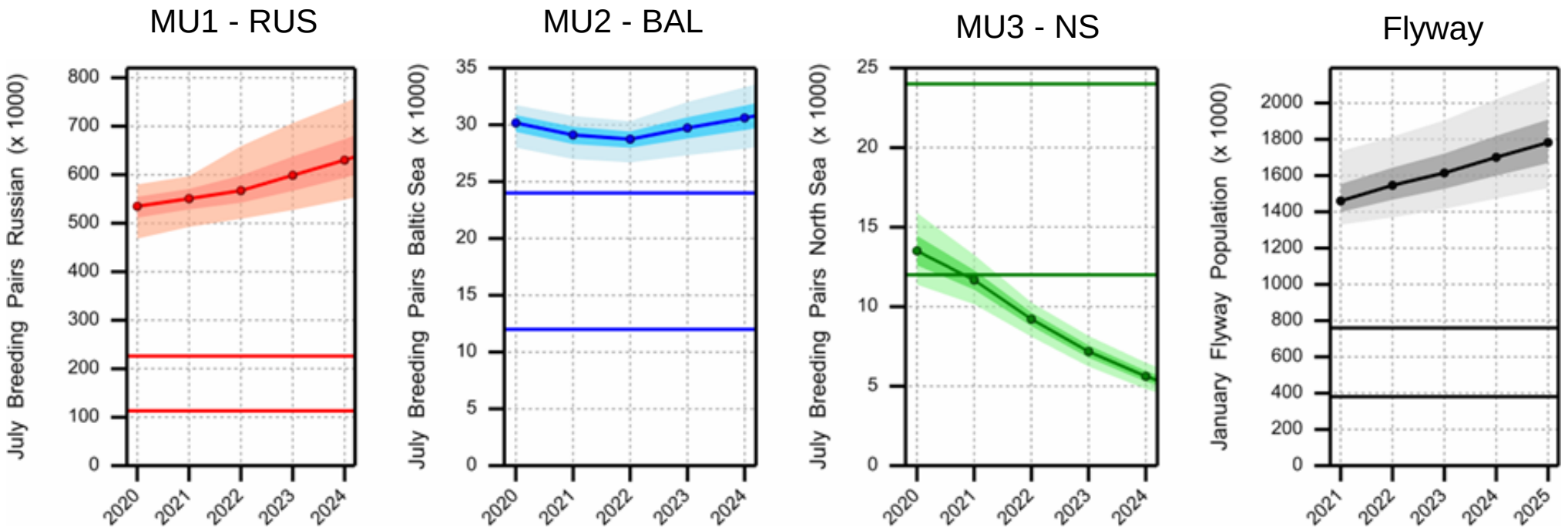
Management guidance



"Business as usual scenario" – current level of derogations

→ Number of breeding pairs in MU3 will go down below FRP in next years, MU2 will remain on about same level and overall flyway size not affected and predicted to increase further in the next years

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Decision points / Take note of

Management strategy:

- Current level of derogations (and unknown harvest in Russia) does not affect populations in MU1 Russia and MU2 Baltic in terms of conflict with FRP (or even 200% threshold for caution measures)

- For MU 3 North Sea population, current level of offtake will result in numbers falling below FRP in the next years and being within 200% threshold (for a long time already) also collaboration/ordination needed among MU3 states NL, BE and DE (recalling Mondays' discussions in the TF)

- In order to keep MU3 – North Sea population above FRP, derogation effort need to be halved to stop decline and more than halved to recover to a level well above FRP

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Decision points / Take note of

Gaps in data provision (affecting performance of IPM):

Table A.4. Overview of available monitoring data in the Russia/Netherlands and Germany Barnacle Goose population. X data collected at national level/annually, (x) data collected but not annually and/or not at national level, - data currently not collected, * not relevant range state in this respect.
[1] note that Germany only submits data once every six years (full dataset up to 2016), and recent years are based on published data only
[2] Norway is not a EU-country, but applies similar rules when it comes to management for Barnacle Goose

	RU	FI	EE	SE	NO	DK	DE	NL	BE	Remark
January census	*	*	*	X	*	X	X[1]	X	X	
Summer census	-	X	-	-	(x)	(x)	(x)	X	(x)	
Productivity, MU1 and MU2	*	*	*	-	*	-	X	X	-	Autumn, Nov-Dec
Productivity, MU2	*	(x)	-	-	(x)	-	*	*	*	Summer, Jul-Aug
Productivity, MU3	*	*	*	*	*	*	(x)	X	-	Summer, Jul
Offtake, hunting	-	*	*	*	*	*	*	*	*	In EU-countries only derogations
Offtake, derogations	*	X	X	X	X[2]	X	X	X	X	Mostly annual totals

Main data issues:

MU1: no harvest data (but analysis planned to estimate this from ringing and recovery data)

MU2: no summer counts and productivity estimates from SE; no complete or annual coverage in NO and DK

MU3: mainly based on data from NL

All: derogation figures difficult to assign to MU and period of the year (IPM works with Jul-Jan and Jan-Jul) as often only total per annum

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Thank you!

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Norway: Kjell Isaksen (City of Oslo), Ingunn Tombre (NINA)

Sweden: Leif Nilsson (Lund University)

Finland: Teemu Lehtinimie & Tero Toivanen (BirdLife Finland), Nina Mikander (Ministry of Environment), Markku Mikkola-Roos (SYKE Finnish Environment Institute)